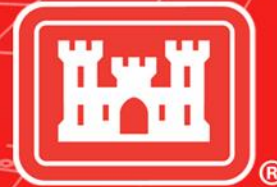




US Army Corps of Engineers



Agency Model Reviews

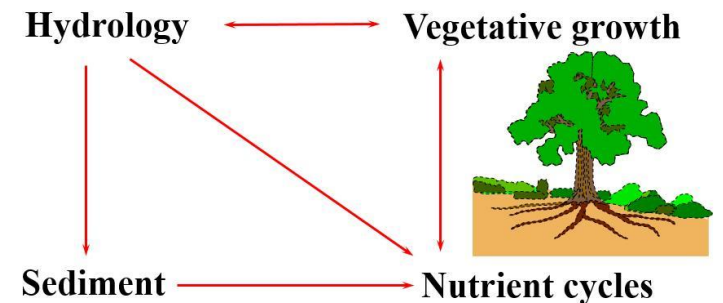
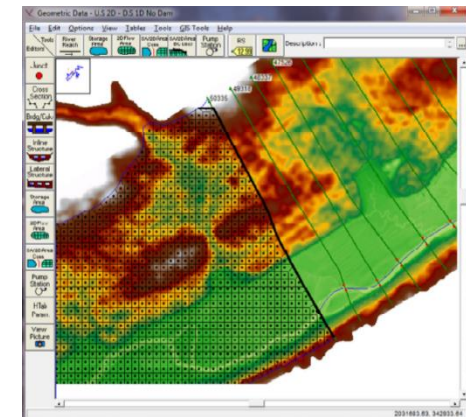
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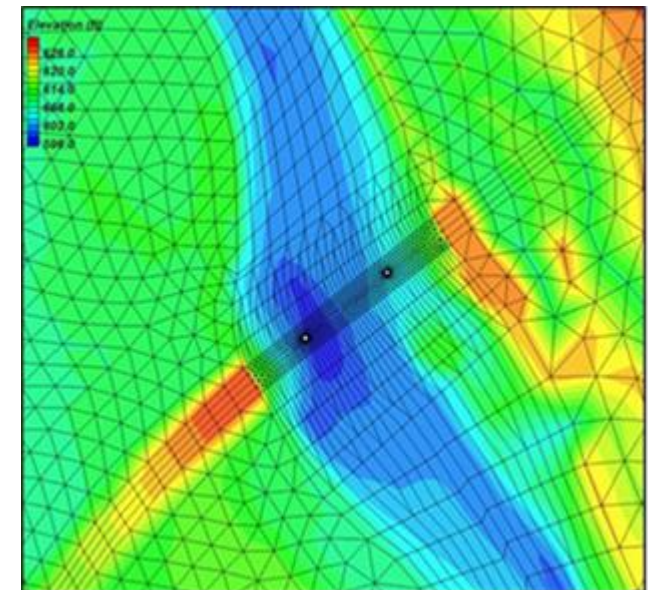
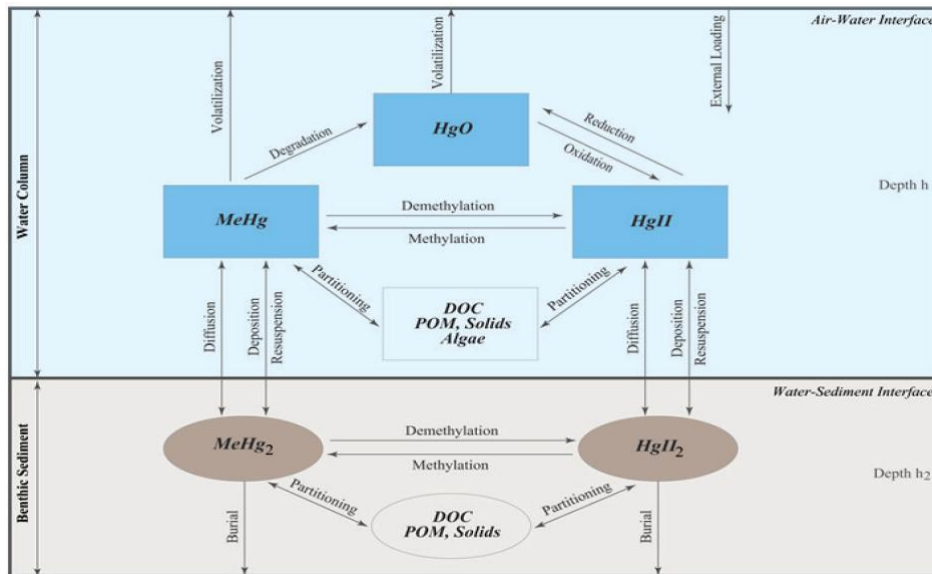
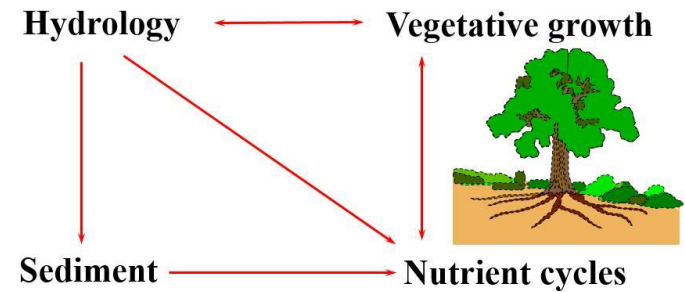
ERDC – HEC Coordination

- The Engineer Research and Development Center (ERDC) and the Hydrologic Engineering Center (HEC) are collaborating to provide water quality capabilities to HEC modeling tools.
 - Nutrient Simulation Module (NSM-I and NSM-II)
 - Hydrologic Modeling System
 - RAS-1D
 - RAS-RVSM (Riparian Vegetation Simulation Module)
 - RAS-2D
 - RESSIM-CE-QUAL-W2



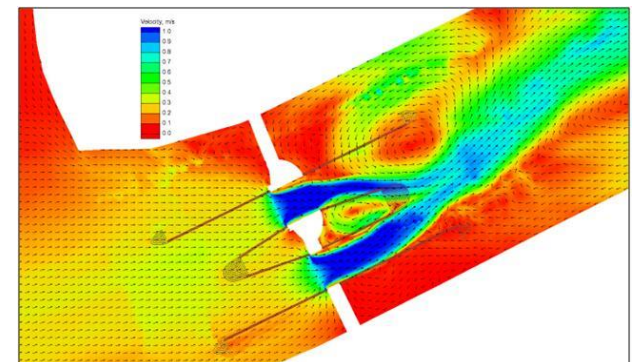
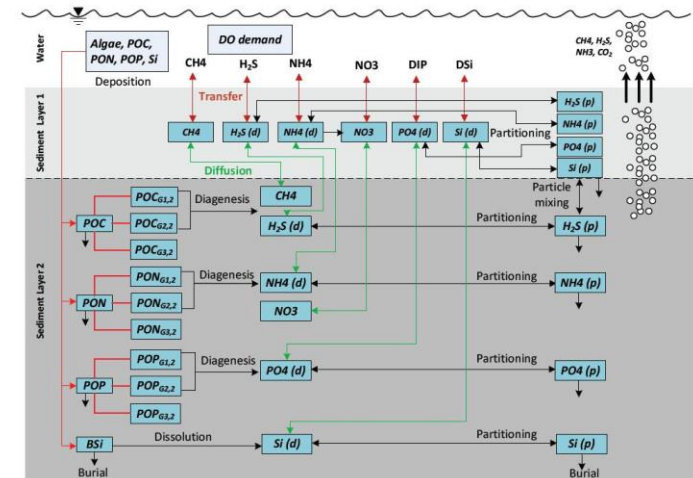
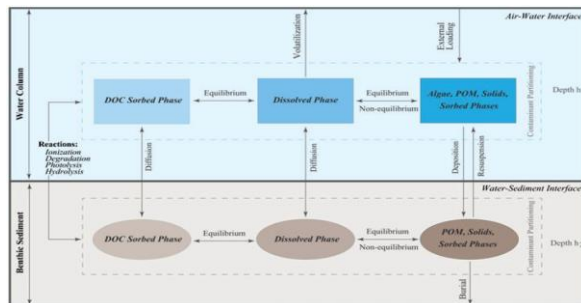
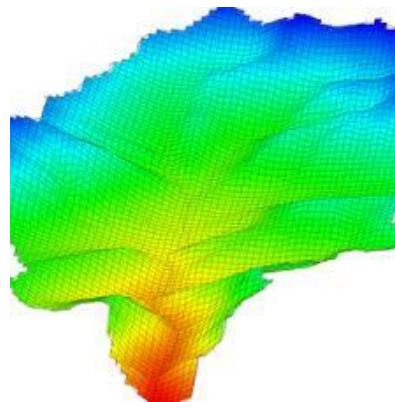
ERDC – USBR Coordination

- The Engineer Research and Development Center (ERDC) and the U.S. Bureau of Reclamation (USBR) are collaborating to provide water quality sub-modules.
 - RVSM (Incorporating into SRH-2D)
 - Mercury (Incorporating into SRH-2D)



ERDC – Intra-Laboratory Coordination

- The Engineer Research and Development Center (ERDC) Laboratories (EL, CHL, CERL, CRREL) are collaborating to provide advanced water quality modeling capabilities.
 - Integrating NSM and CSM (Contaminant Simulation Module) with AdH (Adaptive Hydraulics) model
 - Developing advanced soil temperature modeling within GSSHA in order to model Permafrost in Arctic Regions





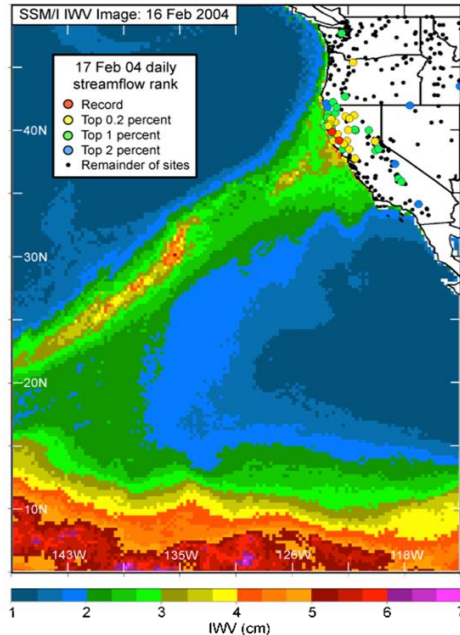
HSPF.MIL

- Military enhanced version of HSPF
- Improved sediment transport for unpaved roads – WEPP
- Military Training Intensity Methodology
- AQUATOX Linkage – indicators of aquatic health
- Multi-level Canopy Compartment – improved representation of hydrologic and water quality processes for above-ground vegetation and forest canopy compartments was developed
- Climate non-stationarity assessment



Forecast Informed Reservoir Operations FIRO

- Improved predictability of atmospheric rivers (Russian River)
- Improved Supply Reliability for Downstream Uses
- Enhance Flood Risk Reduction





Water Operations for Environmental Improvement

- Environmental Flows
- Harmful Algal Blooms
- Greenhouse Gas Emission Reductions
- Reservoir Shoreline Habitat Benefits
- Beneficial Use of Sediment Downstream
- Improved Operation Strategies for Water Storage while Maintaining Flood Control



Questions

